

## New Dimensions Added to Highway Programs

Remarks by Federal Highway Administrator F. C. Turner at the Mississippi Valley Conference of State Highway Officials, Chicago, Illinois, March 1971

In the evolution of our national highway program, the Federal-aid Highway Act of 1970 will take its place as benchmark legislation.

It merits this description because it affirms in many practical ways the concerns and the priorities of our time. It looks from this vantage point with a sound plan for the future. And in so doing it provides those of us who manage the highway program with new support and new opportunities to serve our fellow citizens.

We have been administering a program whose foundations were laid in the 1956 legislation. But we have not been constrained by blind adherence to a set of plans and specifications drawn up in 1956. On the contrary, we have approved some very significant change orders along the way. America has been changing these past 15 years and so have we. To use the broadest description, it is the quality of life that has increasingly concerned our fellow citizens. And I believe we in the highway program have been quick to respond to these emerging concerns—not just with agreeable rhetoric but with meaningful action.

### Change in View

Last year, as this legislation was being considered, I testified before the Senate Subcommittee on Roads, and I offered this observation:

"I would point out that many of the things that we are looking at today that we consider to have been mistakes in the program are largely things that we did under a different policy. We have changes in our policy, we have changes in our personnel.

"I would point out to you that a little over 10 years ago I sat before this same committee in this same witness chair, and was berated rather heavily along with other highway officials, as to the high cost of this particular program, and the emphasis then was on cost, do it cheaper, cut out fringe things, keep the cost down.

"The policy has changed. The people have changed. This is progress, and we have made those changes. We changed our policy, we changed our procedures, we changed our points of emphasis. I believe we are working now in harmony with the policy and legislation that is before us, and I would hope that we would be allowed to continue to administer the program and get the job done in the way that you are asking us to do."

### Broadened Concepts

I believe the 1970 Act does give us very substantial support in doing the job ahead.

This Act embraces the broadened concept of the highway program that has been growing over the past decade.

It is concerned with the social responsibilities of the highway program—with safety, with the environment, and with other human values.

It is particularly responsive to the problems arising from the continuing urbanization of our country.

It takes the long view, setting forth necessary steps for the orderly development of the continuing strong highway program we must have to meet the growing transportation needs of the Nation.

Let's take the last point first—that of formulating policies for the future of the program.

### Interstate System

First, the Act looks to the conclusion of the Interstate System construction program launched in 1956. It provides for removal from the system by July 1, 1973, of those segments whose construction is not assured, and the reallocation of this mileage. It sets

a deadline of July 1, 1975, for submission of all Interstate System plans, specifications and estimates.

It extends Interstate authorizations through fiscal year 1976, but leaves a final authorization to be enacted at a later date, while requiring a final cost estimate to be submitted in 1974. It assures continued funding by extending the Trust Fund five years to October 1, 1977.

### Realignment of Systems

Next, looking to the future of the regular Federal-aid program, it directs the Secretary of Transportation to make recommendations in 1972 for the functional realignment of the Federal-aid systems, based on studies made in cooperation with the State highway departments and local governments. Also in 1972, the Secretary is to make recommendations for a continuing Federal-aid highway program for the period 1976 to 1990.

In addition the Act provides for a reduced State matching requirement, by setting up a 70-30 Federal-State funding ratio with FY 1974 funds. Meanwhile the Act extends the ABC and rural supplement authorizations

at their current level through fiscal 1973.

### National Highway Institute

Again, looking to long-range needs, the Act provides for establishment in the Federal Highway Administration of a National Highway Institute to assure a future supply of trained manpower for the Federal-aid highway program. The Institute will be developed in cooperation with the State highway departments and will be open to Federal, State and local highway employees.

It is noteworthy that this provision includes local employees. This is one of several instances where the Act specifically attempts to strengthen the participation of local government in the Federal-aid highway program.

Now let us turn to the new features the Act provides in our operating programs. It is here that we see reflected the concerns—shared by highway officials and the public's representatives in the Congress—over the problems of urbanization, the environment, and human values. It is here that we highway officials are given a mandate to do something about these concerns.



**AWARD WINNER—**  
Rapid transit facilities in the median strip of the Dan Ryan Expressway extend rapid transit service to Chicago's southside. In the third annual "Highway and Its Environment" competition, this won second place in the category of Outstanding Example of Multiple Use of Highway Right-of-Way. Deadline for entries in the fourth annual competition is Sept. 30.

Urban growth has been one of the most remarkable processes of our century, and very likely will continue to be in the remainder of the century. About 70 percent of Americans now live in urban areas, and 80 percent will within another decade or two.

Urban living is made possible, among other things, by transportation, by the daily, hourly movement of goods and people. And the adequacy and efficiency of the transportation available to our urban areas has much to do with the quality of life in those areas.

Today, these urban areas are overwhelmingly dependent on highway transportation. And there is every reason to believe they will continue to be for the rest of this century.

If they are going to continue to grow, so must highway transportation. The challenge to the highway official is to get the most efficiency possible out of the urban highway system with the resources available to him.

### Current Urban Programs

The Federal interest in this challenge has grown over the years as urbanization has proceeded. In the forties, the primary and secondary systems were extended into urban areas. In the fifties, urban freeways were incorporated into the Interstate System. In the early sixties, the urban transportation planning requirement became law, thus providing a necessary foundation for decision-making on which we can call today. And in the late sixties, Federal aid was made available for traffic operations improvements—the TOPICS program.

The 1970 Highway Act adds several new dimensions to the Federal interest in urban transportation. Combining it with existing programs, plus companion legislation for urban mass transportation assistance, we get a comprehensive set of tools to deal with urban transportation problems.

These tools include an active, on-going planning process; the Interstate program to provide the larger urban areas with a limited network of high capacity freeways; ABC funds to improve a limited number of major arterials, and the TOPICS program to increase the capacity and safety of major street systems beyond the ABC routes.

Now, the 1970 Act provides for creation of a new Federal-aid urban highway system, and authorization to use Federal-aid funds for highway-related improvements to serve bus transit. And the mass transit legislation provides funds to purchase new buses and operating equipment through UMTA.

The Federal-aid urban system will consist of arterial routes other than those now on the primary and secondary systems in urban areas of 50,000 and more population. The routes are to be selected cooperatively by local officials and State highway officials, who are to be guided by the urban transportation planning process in determining which routes will best serve the goals and objectives of the community. The Secretary is to report to Congress in 1972 on the designated system and its cost of construction. This system should materially assist the urban areas in meeting their transportation demands.

### Rush Hour Congestion

Of course, one of the major problems large cities have today is that of rush hour traffic congestion. This is what most people have in mind when they complain of the transportation crisis. In the context of the overall transportation needs of our urban areas the rush hour traffic is a relatively small portion of total transportation movement—since trips to and from the downtown comprise only five to 15 percent of total urban trips. But it is a problem when transportation corridors to and from downtown become overtaxed under peak hour loads.

In all but a handful of cities the only practical solution to this problem is to divert commuters from private autos to higher capacity vehicles, namely buses and car pools, and thereby increase the people-moving capacity of our urban highways. And this is the only solution that can be applied in the immediate future—in a matter of a year or two.

### Assistance for Mass Transit

If rubber-tired mass transportation is to succeed in luring commuters out of their cars it will have to provide fast, convenient and comfortable service. The highway program can offer a major assist in bringing

this about, by providing preferential treatment for buses--and car pools--in moving rush hour traffic.

The 1970 legislation specifically authorizes this type of assistance by making Federal-aid funds available for the construction of exclusive bus lanes on freeways, bus roadways, traffic signals and other control devices to give buses preferential treatment, bus passenger loading areas and facilities, including shelters, and fringe and transportation corridor parking facilities to serve bus and other public mass transportation passengers.

In addition, fringe and corridor parking facilities can be constructed with Federal-aid urban system funds.

#### A Cooperative Effort

Improvement of bus transit is not a unilateral endeavor, of course. It is a joint venture that requires cooperation of all levels of government. It requires cooperation at the Federal level between the Federal Highway Administration and the Urban Mass Transportation Administration, and we in turn must cooperate with State and local

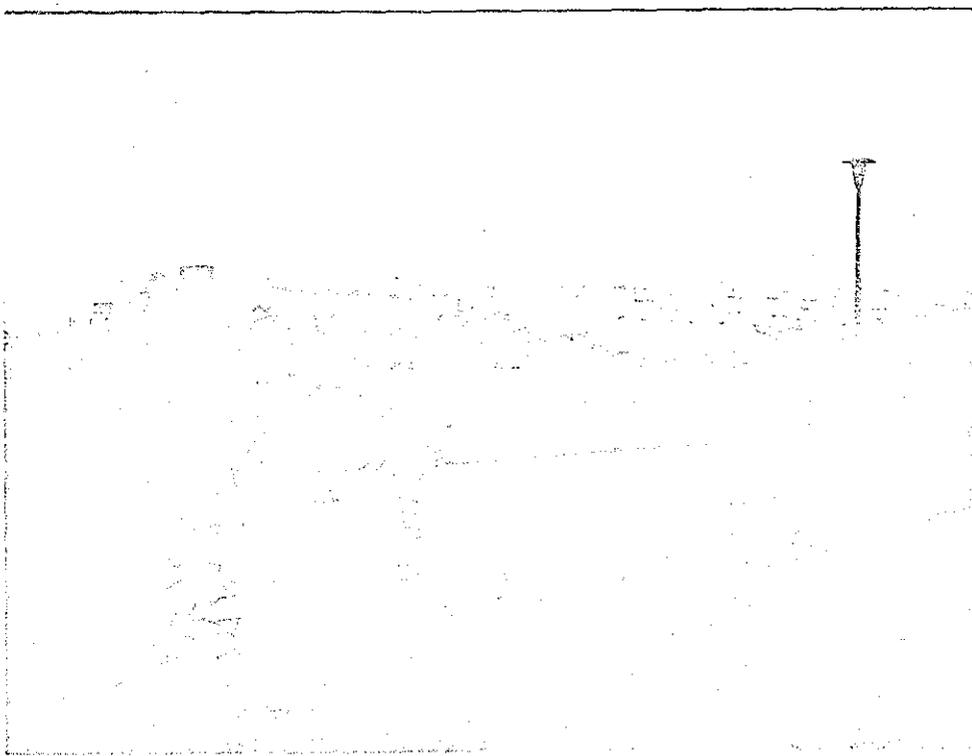
officials and transit operators if we are to get the necessary assurance that transit-related highway projects will be effectively utilized.

Nevertheless, I believe we have a real opportunity here, and I would urge State officials to examine their opportunities carefully as we prepare the report Congress has directed on the need for additional highway facilities or the adjustment of existing facilities to accommodate highway public transportation.

#### Economic Growth Centers

In addition to the new aids it provides for urban areas, the 1970 Act also shows concern for the problems of over-urbanization. It offers a demonstration program which would use highway improvement to help check the migration from rural areas and small towns to overcrowded cities.

The Act provides for a new program of economic growth center development highways to be funded at \$50 million a year. The Secretary is authorized to make grants for demonstration projects that would lead to



**AWARD WINNER--**  
Attractive landscaping and architecture invite the motorist to stop and view the scenic vista from the Hunter Hill Rest Stop on Highway 80 east of Vallejo, California. In the third annual "Highway and Its Environment" competition, this won second place in the category "Outstanding Safety Rest Area with Sanitary and Other Features."

the development of economic growth centers in places of 100,000 population or less. The approach is similar to that of the present Appalachian road program, and projects must be on the Federal-aid primary system. The Federal Government can pay 100 percent of the cost of engineering and economic surveys and can add another 20 percent to the traditional 50 percent matching funds. It is emphasized that the demonstration projects must involve regular Federal-aid funding.

This program, with its objective of improving living conditions and the quality of the environment, could prove a significant example of the use of the highway program for social progress.

### Relocation Assistance

Another outstanding example in the 1970 Act is the expansion of the relocation assistance program--the forerunner of the Uniform Relocation Assistance and Real Property Acquisition Act of 1970, which has now superseded our legislation.

As you know, these laws have expanded relocation assistance benefits to include compensation for increased interest rates on replacement housing, and to authorize the construction or acquisition of replacement housing where none is otherwise available.

This relocation program is delivering real social and environmental benefits by ensuring that all persons displaced by highway construction find decent, safe and sanitary housing, including those who previously lived in substandard units.

### Training Programs

Yet another example of social responsibility can be found in the 1970 Act's provisions authorizing establishment of training programs for highway construction workers--on an equal opportunity basis.

There has long been an awareness in the highway program of the potential impact of highway improvements on economic, social and environmental values. We have studied these impacts for years and shaped our procedures accordingly. We devote a substantial portion of highway resources to environmental improvement, and were doing so long before it became a popular issue.

### Guidelines for Community Values

Our policies have changed over time to reflect the greater emphasis that the public expects in this area. Now, the 1970 Act continues this developing process by requiring the establishment of guidelines by 1972 to assure full consideration of possible adverse economic, social and environmental effects of proposed projects and the costs of eliminating or minimizing them.

The Act also requires a development of standards for highway noise levels and guidelines to assure that future projects are consistent with applicable air quality standards.

### Billboard and Junkyard Control

Congress also made new money available in the 1970 Act to revive the billboard control and junkyard control programs of the Highway Beautification Act of 1956, and it created a commission to report back within a year with recommendations on how to make these programs more effective.

Meanwhile, as you know, Secretary Volpe has lifted the moratorium on the penalty provisions of the Beautification Act and has called upon all States that have not yet done so to get the necessary legislation and agreements with FHWA to enforce billboard control.

I am personally hopeful that we will soon see some visible improvement in our roadside environment as a result of the Secretary's initiative. And I am sure our motorists will welcome it.

### Priority for Highway Safety

Another major concern in the 1970 Act is highway safety. The Act transformed the National Highway Safety Bureau into the National Highway Traffic Safety Administration. And it accepted Trust Fund research programs authorized by the Highway Safety Act of 1966--that is, for State and community highway safety programs.

The Federal Highway Administration retains responsibility for these State and community safety standards having to do with the highway element. It also retains the Bureau of Motor Carrier Safety, with its regulations for trucks and buses.

I can assure you that this division of safety responsibility will in no way diminish the

high priority we put on safety across the board in FHWA programs. That goes for our highway safety standards, for the spot improvement program, for the clear roadside program as well as for our involvement in the State and community programs. These programs are yielding tangible payoffs in saving lives and preventing injuries, and we mean to increase their effectiveness.

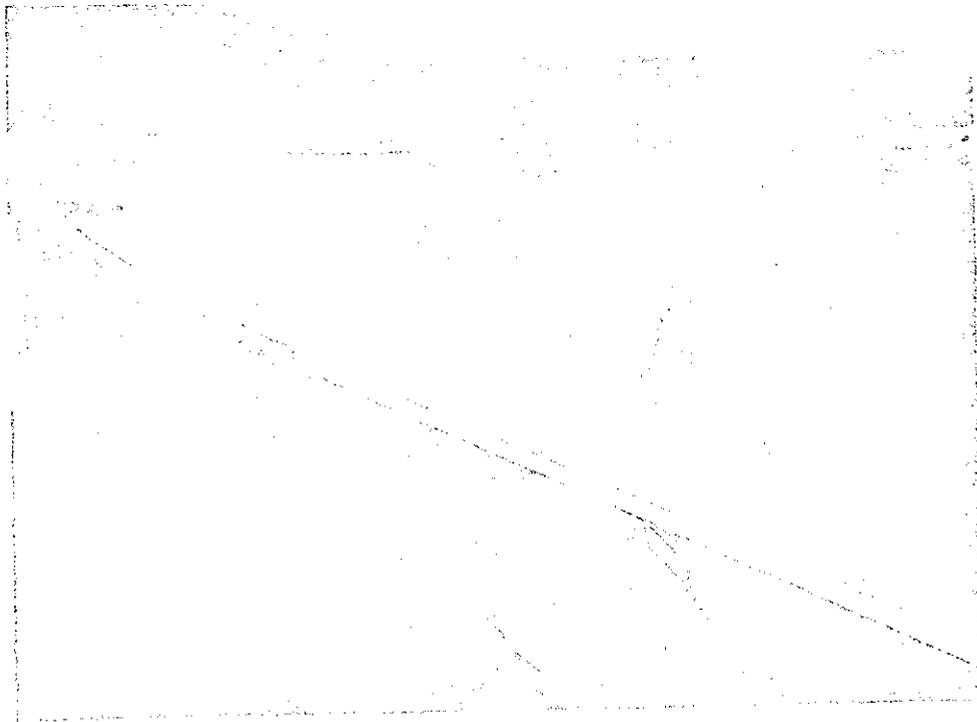
### Safety of Bridges

The 1970 Act adds a new safety responsibility for the Federal-aid highway program. It requires an inventory of all bridges on the Federal-aid systems over waters and other topographical barriers, and makes new funding available to begin the replacement of the worst of them. Bridges are to be classified according to their serviceability, safety and

essentiality for public use, and then assigned a priority for replacement. To get this program underway, \$250 million is authorized for the next two years. Federal funds can pay 75 percent of the replacement costs.

There are many other details to the 1970 legislation. I have tried to review the highlights and to show that this Act, and the highway program, are in step with the times, and are proceeding soundly to meet the long-range needs of the Nation—not only its transportation needs, but the many social and economic objectives which our vital highway program serves.

The Federal-aid Highway Act of 1970 is a law worthy of a great public works program—a program that harnesses the cooperative efforts of all levels of government for the benefit of all Americans.



**AWARD WINNER—**  
Cowlitz River Bridge at Mossyrock in Lewis County, Washington, with its 520-foot span, is the longest concrete arch bridge in North America. In the third annual "Highway and Its Environment" competition, this won second place in the category of Outstanding Bridge, Overpass, Tunnel Approach, Interchange Area, or Other Structural Feature.

THE CITY HAS BEEN WITH us for quite a while. Even back in the golden days of ancient Greece, the city was present in a pretty advanced form. The Romans developed it even further. It received a setback during the Dark Ages, but it was still present.

All through the ages in which the city has existed, it has had one dominant characteristic: its very existence has depended almost totally on its highways and streets.

That remains true today. It will remain true tomorrow—and for as many tomorrows as can presently be foreseen.

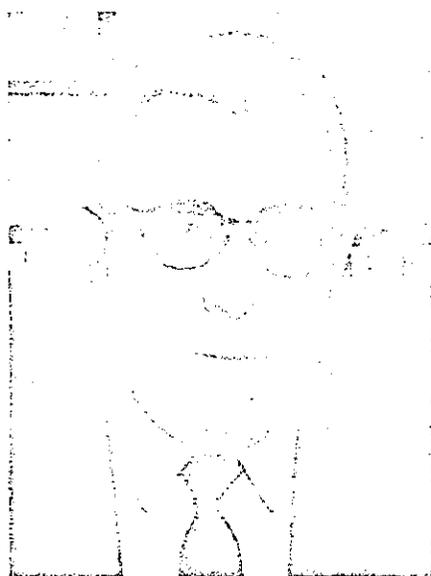
It is perhaps an irony that such a key factor in the life and development of the city—and without which the city could not exist—is almost completely taken for granted. But this is similar to the “take-it-for-granted” attitude with which we accept any other of our many commonplace, routine items of life.

Highway transportation permeates virtually all facets of a city's everyday life.

If there is a fire, you need the firemen and their trucks quickly! How do they get there? By street and highway, of course. Fast travel for such equipment by our street network in cities has certainly been an important factor in keeping our homeowners' fire insurance premiums low—and this is a worthwhile dividend for the citizens of a city which we never really associate with an adequate street network.

The same is true for other emergency vehicles.

Think, too, of the truck traffic which is so vital to the economic life of a city. In the movement of goods and services—no matter what form of *intercity* transport is used—trucks almost exclusively originate and terminate all cargo. It is by this means that the stores in the city—along with those in the surrounding suburbs—receive all that infinite variety of goods so essential to the life of an urban area: the food, the clothing, the housing materials, appliances, medicines.



By Francis C. Turner

Federal Highway Administrator

newspapers and publications, *ad infinitum*.

It seems to me that the relative importance of highways to a city is very obvious. They simply are irreplaceable—because there is nothing with which to replace them. And there will not be in our lifetime.

The highway program is often pictured in the press as being badly bogged down in controversy, particularly in the cities.

This simply is not true!

The fact is that only a little more than 100 miles of Interstate System routes, in 11 cities, are being delayed because of some controversial aspect of the proposed route. This represents less than 1.5 percent of all urban Interstate mileage.

That is hardly being “bogged down.”

However, those few cities where Interstate freeways are currently stalled had better get busy solving their problems. The states must provide firm assurances by 1973 that these urban routes will be completed expeditiously—or the Secretary of Transportation will have to delete them from the Interstate System. And that would be a definite loss to any city, with widespread and lasting ramifications.

There is another falsehood that gets bandied about quite a bit, and that is that urban highway construction and improvements take land from the ratable rolls, and thus compel the remaining taxpayers to make up for the loss by having to shoulder an added tax load.

But this tells only half of the story.

We have in our files at the Federal Highway Administration hundreds of studies which show that while there may be a brief loss in ratables in some instances, in the overwhelming majority of cases, the highways bring with them substantially increased economic benefits.

One of the best documented, and best known, cases is Route 128, a circumferential highway around Boston. It was opened in 1951, and by 1959 it was estimated that more than \$137 million had been invested in new plants along the route, employing some 27,500 workers. Although some of this activity involved relocation from other parts of the community, the net gain to the whole metropolitan area represented an estimated \$120 million, and added 19,000 new employees to the area's payrolls.

The second example involves a smaller town—Yankton, South Dakota, a city of 9,000 population where 3.1 miles of U.S. 81, running through the heart of the community, were widened and upgraded in design at a cost of \$852,489. We have made an in-depth study of this project, and we learned some interesting facts.

The study showed that the highway improvement saved time and money for the citizenry, reduced accidents, spurred business, boosted employment, hiked land values, and increased the tax base!

Since highways are so essential to the life of a city, that could logically bring us to the question, “how are the cities faring under the Federal-state highway program?”

The answer is—they are faring very well, indeed. And rightly so.

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## CITY LIFE LINES

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About half of the highway user taxes that go into the Highway Trust Fund are derived from travel on streets and highways in urban areas, including the large volumes of travel on urban extensions of state highway systems. At the same time, our inventories of highway needs indicate about half of the capital improvements are needed in urban areas.

The latest published information, as of December 1970, showed that total estimated expenditures in 1970 on all streets and highways in cities, by all units of government, was approximately \$6.3 billion. Of this total, \$3.3 billion of Federal and state highway user taxes was directly expended for improvements and maintenance of those portions of Federal and state routes serving urban areas, and an additional \$844 million of highway user taxes was contributed by states' grants-in-aid to municipalities, primarily for construction or maintenance of municipal street systems.

Of course, the city dweller also benefits from the highway user taxes

spent for improvements to rural roads, for statistics tell us that slightly more than half of the total travel on rural roads is done by city residents. This is a fact that I think is sometimes overlooked--that the city resident needs the rural roads to get where he wants to go when he leaves the city. And, of course, the produce and goods that the city needs for its everyday life arrives over these same rural roads.

Another area in which the highway program is benefitting the city is in upgrading substandard housing.

Of course, no one likes to lose his home or business to make way for a new road, or anything else, whether it be a park or a hospital. This is only natural. But sometimes it is necessary, and when it is, as a result of the provisions of the Federal-Aid Highway Act of 1968 and the Federal Relocation Assistance Act of 1970, we are providing a model of humane treatment for those persons who must relocate.

We also provide benefits to renters and apartment dwellers who must move, and as a result of these payments, many people have been able to afford the down payment

on a house for the first time in their lives.

It is our experience that inevitably the housing that replaces that taken for the highway is of a higher standard--and that most people who have had to move have actually improved their housing situation.

Another means by which the highway program has been providing "bonuses" to cities in the way of side benefits is in the multiple use and joint development concepts. Under these programs, the right-of-way obtained for freeway development is used for other worthwhile projects, as well.

We have been utilizing the air space above and below freeways for high-rise apartment buildings, office buildings, bus depots, playgrounds, public basketball and tennis courts, parking facilities, and the like. We are using space alongside the rights-of-way for such desirable development as schools, recreational facilities, parks, etc.

The Federal-Aid Highway Act of 1970 contained a new provision which has great significance for every city. It is the one calling for creation of a new Urban Federal Aid Highway System.

This new Urban System will consist of arterial routes other than those now on the Primary and Secondary Systems in urban areas of 50,000 and more population. The routes are to be selected cooperatively by city and state highway officials, who are to be guided by the urban transportation planning process in determining which routes will best serve the goals and objectives of the community. The Secretary of Transportation is to report to Congress in 1972 on the designated system and its cost of construction. The roads and streets on the system can either be upgraded existing ones, or, where needed, totally new ones.

I believe that this new system will be a real boon to our cities. Combined with our existing programs, it will mean Federal-aid support for improvements to handle 75 to 80 percent of all vehicle miles of travel in our urban areas. Thus the Federal-aid program is offering very substantial relief to local governments.

Of course one of the main problems confronting the city today is



Construction of a \$16 million multi-level interchange to unsnarl traffic congestion at a key Ohio River Boulevard intersection will soon be bringing substantial relief to Pittsburgh motorists. Aerial view shows six of seven ramp and bridge structures under construction. More than 6,300 tons of structural steel are being fabricated for the project by Bethlehem Steel.

that of rush-hour traffic congestion. The solution to this problem is to get more utilization out of our existing street network through greater use of public transportation or high-occupancy carpools.

When we talk about rapid transit, we must in practical terms be talking about bus transit because this is and will be the mode in all but a handful of cities.

The Federal Highway Administration in cooperation with our sister Department of Transportation agency, the Urban Mass Transportation Administration, has promoted several highly successful ongoing bus transit programs around the Nation. All have the same ob-

jective: to help solve rush-hour traffic congestion.

Some other brand new tools are available in the FHWA and UMTA to help cities solve their transportation problems. For example, if studies show that construction of an exclusive busway would move more people more expeditiously and practically than construction of a proposed highway project, or reduce its scope, then the funds that would have been used for this portion of the highway project can be used to build the busway, instead.

And UMTA can then provide grants to assist city transit companies to obtain fleets of modern, comfortable buses.

The future of our cities is inextricably tied up with transportation, and that transportation is overwhelmingly oriented to an adequate streets and highway network moving automotive types of vehicles. We all must therefore find ways to improve and live with the system, rather than beat our breasts and write letters to the editor decrying its faults. □

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*(The foregoing are excerpts from a talk delivered last month before a meeting of the American Public Works Association in Washington, D.C.)*

## ROADS AND HIGHWAYS—A BARGAIN

**F**OR AN AVERAGE OF JUST 30¢ per day for each of our 200 million citizens, Americans are being provided with a network of roads, streets, highways and super-highways, unmatched anywhere in the world. This is the highway story our industry has to tell in new ways and to more and more people.

That 30¢ includes the cost of new construction, maintenance, engineering, research, beautification, litter and snow removal, sanding and salting... everything!

For just 30¢ a day every American has a ticket to travel anywhere in this country, in his own vehicle, on his own schedule, stopping whenever and wherever he wants, even towing his house along with him. He can also drive to work, travel to school, drive to the shopping center, haul the groceries, get to a ball game, and go to meetings.

In addition, that same 30¢ provides the network over which most of our products move and which gets us and freight to and from the airport, train station, bus station, or a mass transit facility.

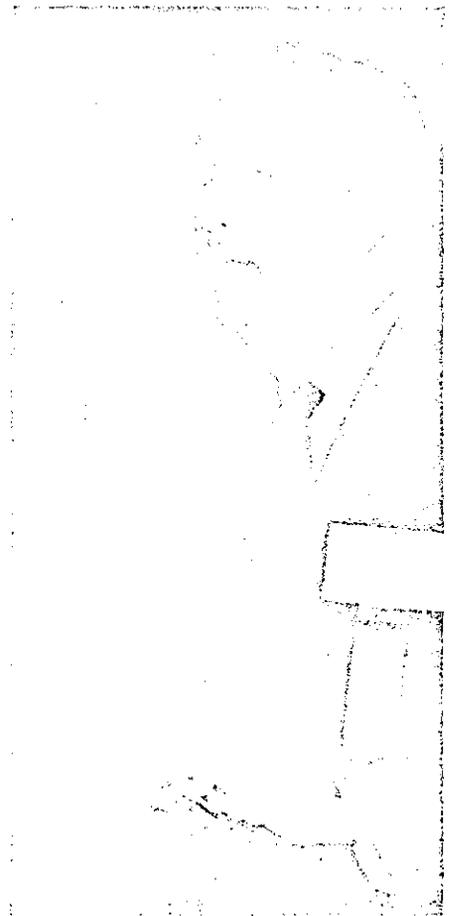
This 30¢ a day, multiplied by over 200 million people, multiplied by 365 days a year adds up to a little over 20 billion dollars a year. That's the total spent by our Federal, state, and local governments for

highway purposes each year. Unless I've miscalculated, that makes highways our third largest governmental expenditure, right behind defense and education. In all of its ramifications transportation is the largest capital goods industry. Virtually every cent of the taxes are obtained from the transportation user in direct ratio to his usage.

### '71 Funds "Squeaked Thru"

Unfortunately, there are also others who are interested in that 20 billion dollars, particularly that part of it in the Highway Trust Fund. Thanks to the support of a lot of people who began to respond once the potentiality of inadequate highway legislation became apparent, we squeaked through with a highway program—or at least fund authorization—in both House and Senate last year, however, since the House and Senate legislation differed considerably, a conference committee compromise measure was necessary.

The fact remains that the message didn't get all the way to "Garcia!" While the funds have been authorized and something like five billion dollars sits gathering dust (gold dust?) in Federal vaults, the total fund authorization has not been released for state use on the



By E. H. Holt  
President, ARBA

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